

(FILE 'HOME' ENTERED AT 07:55:04 ON 24 MAR 2003)

FILE 'MEDLINE, BIOSIS, CAPLUS, EMBASE, CANCERLIT' ENTERED AT 07:55:15 ON  
24 MAR 2003

L1	2945 S VOLTAGE GATED POTASSIUM
L2	9007 S SHAKER
L3	4371848 S MAMMAL?
L4	108 S L1 AND L2 AND L3
L5	66 DUP REM L4 (42 DUPLICATES REMOVED)

L Number	Hits	Search Text	DB	Time stamp
1	2	("20020119476").PN.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/03/24 07:43
2	2	("9523858").PN.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/03/24 07:43
3	0	("95023858").PN.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/03/24 07:44
4	1	("5559009").PN.	USPAT	2003/03/24 08:01
5	2925	potassium adj channel	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/03/24 08:01
6	29590	shaker	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/03/24 08:02
7	96	(potassium adj channel) with shaker	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/03/24 08:02
8	32	((potassium adj channel) with shaker) and mammal	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/03/24 08:02
9	88	((potassium adj channel) with shaker) and mammal\$	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/03/24 08:02
10	86	padigaru.in.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/03/24 08:03
11	256	vernet.in.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/03/24 08:03
12	136	shimkets.in.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/03/24 08:03
13	76	spaderna.in.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/03/24 08:03
14	31	majumder.in.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/03/24 08:03
15	431	padigaru.in. or vernet.in. or shimkets.in. or spaderna.in. or majumder.in.	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/03/24 08:04
16	0	(padigaru.in. or vernet.in. or shimkets.in. or spaderna.in. or majumder.in.) and (((potassium adj channel) with shaker) and mammal\$)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/03/24 08:04

17	49	(padigaru.in. or vernet.in. or shimkets.in. or spaderna.in. or majumder.in.) and channel	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/03/24 08:04
18	3	(potassium adj channel) and (padigaru.in. or vernet.in. or shimkets.in. or spaderna.in. or majumder.in.)	USPAT; US-PGPUB; EPO; JPO; DERWENT	2003/03/24 08:04



PubMed	Nucleotide	Protein	Genome	Structure	PMC	Taxonomy	OMIM	Books
Search Nucleotide		for		Go		Clear		
Limits		Preview/Index		History		Clipboard		Details
Display	default	Show:	20	Send to	File			

☐ 1: AI324179. mh83g06.x1 Soares...[gi:4058608]

[Links](#)

#### IDENTIFIERS

dbEST Id: 2107739  
EST name: mh83g06.x1  
GenBank Acc: AI324179  
GenBank gi: 4058608

#### CLONE INFO

Clone Id: IMAGE:457594 (3')  
Source: IMAGE Consortium, LLNL  
DNA type: cDNA

#### PRIMERS

PolyA Tail: Unknown

#### SEQUENCE

```
TCCTCCCGCAGCCGCGCCAGCGCCGCGCCCGCCAGCCCGTAGAAGGACACCTCCTCCAGG
AAGACGTCGAGGGGCGAGGTGCGCCGCGCGTCTCAGCCGCGCCCGGACTGGTAGTAGTAG
AGCACCGCATCGAAGCTGGGCGGGTGTCTCGGTCTGAAGAAATACTCGCGGCGCGCGCCGTCG
TAGAAGCGGCTGCGGCGCACCGGGTCCCCCAGCAGCGTGTCCGGGAAGCGGCCGAGCGTG
CGCGCGCGGGTCTCTGAAGCGCAACCCGGCCACGTTGAGCACCAGCCGCTCGCAGCAGCCG
CAGGGCGGCGGGCACCGTGGCTCCATGGCGCGCACAGCCCGGGCGACCGGTGAACGGACG
TGTGGCCCCGACGCCGCGAGCCACCCAGTCGGGTGTCCGGTGTCTGGCGGGTAAAAATAGC
ATGGAAAGTCCGGCCAGGGCGCGGTGGAGGGGGCGGTGTTACCCCCCG
```

Quality: High quality sequence stops at base: 453

Entry Created: Dec 23 1998

Last Updated: Dec 23 1998

#### COMMENTS

This clone is available royalty-free through LLNL ; contact the IMAGE Consortium ([info@image.llnl.gov](mailto:info@image.llnl.gov)) for further information.

MGI:274482

This clone was previously sequenced on the 5' end only, this new data is from the 3' end

#### PUTATIVE ID

Assigned by submitter  
gb:X17622\_cds1 POTASSIUM CHANNEL PROTEIN KV1.6 (HUMAN);  
gb:Y00305 Mouse MBK1 mRNA for mouse brain potassium channel (MOUSE);

#### LIBRARY

Lib Name: Soares mouse placenta 4NbMP13.5 14.5  
Organism: Mus musculus  
Strain: C57BL/6J  
Sex: unknown  
Organ: placenta  
Tissue type: placenta  
Develop. stage: adult  
Lab host: DH10B  
Vector: pT7T3D-Pac (Pharmacia) with a modified polylinker  
R. Site 1: Not I

R. Site 2: Eco RI  
Description: 1st strand cDNA was primed with a Not I - oligo(dT) primer  
[5'  
TGTTACCAATCTGAAGTGGGAGCGGCCGCGGAAATTTTTTTTTTTTTTTTTTTTTTTT  
3']; double-stranded cDNA was ligated to Eco RI adaptors  
(Pharmacia), digested with Not I and cloned into the Not I  
and Eco RI sites of the modified pT7T3 vector. Library went  
through one round of normalization, and was constructed by  
Bento Soares and M.Fatima Bonaldo.

**SUBMITTER**

Name: Marra M/Mouse EST Project  
Lab: WashU-HHMI Mouse EST Project  
Institution: Washington University School of MedicineP  
Address: 4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108  
Tel: 314 286 1800  
Fax: 314 286 1810  
E-mail: [mouseest@watson.wustl.edu](mailto:mouseest@watson.wustl.edu)

**CITATIONS**

Title: The WashU-HHMI Mouse EST Project  
Authors: Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N.,  
Dubuque,T., Geisel,S., Kucaba,T., Lacy,M., Le,M., Martin,J.,  
Morris,M., Schellenberg,K., Steptoe,M., Tan,F., Underwood,K.,  
Moore,B., Theising,B., Wylie,T., Lennon,G., Soares,B.,  
Wilson,R., Waterston,R.  
Year: 1996  
Status: Unpublished

**MAP DATA**

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Revised: July 5, 2002.

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Copyright (c) 1993 - 2003 CompuGen Ltd.

OM nucleic - nucleic search, using sw model

Run on: February 20, 2003, 05:50:07 ; Search time 413.95 Seconds  
(without alignments)  
9781.067 Million cell updates/sec

Title: US-09-804-014a-7\_COPY\_382\_631

Perfect score: 250  
Sequence: 1 gggcgtgtgtctcaactgtgg.....tggaaagaggtggcctttac 250

Scoring table: IDENTITY\_NUC  
Gapop 10.0 , Gapext 1.0

Searched: 16154066 seqs, 8097743376 residues

Total number of hits satisfying chosen parameters: 32308132

Minimum DB seq length: 0

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Maximum Match 100%

Listing first 45 summaries

Database :

```

EST:*
1: em_estba:*
2: em_esthum:*
3: em_estin:*
4: em_estmu:*
5: em_estov:*
6: em_estpl:*
7: em_estro:*
8: em_estr:*
9: gb_est1:*
10: gb_est2:*
11: gb_hic:*
12: gb_est3:*
13: gb_est4:*
14: gb_est5:*
15: em_estfun:*
16: em_estom:*
17: gb_gss:*
18: em_gss_hum:*
19: em_gss_inv:*
20: em_gss_pln:*
21: em_gss_vrt:*
22: em_gss_fun:*
23: em_gss_nam:*
24: em_gss_mus:*
25: em_gss_other:*
26: em_gss_pro:*
27: em_gss_rod:*

```

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

## SUMMARIES

Result No.	Score	Query Match	Length	ID	Description
1	214.8	85.9	468	9	AI324179
2	192.8	77.1	687	13	BI295790
3	191.6	76.6	522	9	AI322534
4	177.8	71.1	477	9	AA021711
5	157.2	62.9	770	12	BF530500
6	155	62.0	443	17	A0939702

7	140.2	56.1	900	14	BQ938497
8	140.2	56.1	927	14	BQ930283
9	135.4	54.2	704	10	BB612634
10	135.2	54.1	839	17	CNS03DKC
11	134.4	53.8	414	9	AL843701
12	125	50.0	316	9	AL844004
13	123.6	49.4	537	17	FR0022804
14	121.8	48.7	1085	17	CNS035KP
15	120.6	48.2	1023	17	CNS02A6D
16	116.2	46.5	433	17	DR17024S
17	112	44.8	665	13	BM492036
18	109.6	43.8	954	14	BQ714749
19	108.8	43.5	954	10	BQ714749
20	106.6	42.6	1109	17	CNS045OM
21	103.2	41.3	1109	10	CNS045OM
22	98.6	39.4	1109	13	CNS045OM
23	98.2	39.3	1058	14	BM924998
24	96.6	38.6	1058	17	BM924998
25	92.8	37.1	1058	12	BM924998
26	90.6	36.2	1054	17	CNS05DBK
27	87.2	34.9	1054	9	CNS05DBK
28	84	33.6	640	13	BG973314
29	83.4	33.4	963	17	CNS0215Y
30	83	33.2	557	10	BE666693
31	82.4	33.0	557	9	BE666693
32	80.4	32.2	876	13	BI117089
33	78.2	31.3	876	13	BI117089
34	70	28.0	876	17	BI117089
35	69.4	27.8	876	10	BI117089
36	69.2	27.7	876	9	BI117089
37	69.2	27.7	876	9	BI117089
38	68.6	27.4	628	14	BQ807519
39	67.8	27.1	628	9	BQ807519
40	64.4	25.8	628	17	BQ807519
41	62.6	25.0	628	9	BQ807519
42	62.6	25.0	628	9	BQ807519
43	62.4	25.0	628	9	BQ807519
44	62.4	25.0	628	9	BQ807519
45	62.4	25.0	628	12	BQ807519

## ALIGNMENTS

RESULT 1  
AI324179/c

LOCUS  
.. DEFINITION  
AI324179  
mh83g06.x1 Soares mouse placenta 4NbMP13.5 14.5 Mus musculus CDNA  
clone IMAGE:457594 3' similar to gb:X17622.cds1 POTASSIUM CHANNEL  
PROTEIN KVL6 (HUMAN); gb:Y00305 Mouse MBK1 mRNA for mouse brain  
potassium channel (MOUSE);, mRNA sequence.

ACCESSION  
AI324179  
VERSION  
AI324179.1 GI:4058608  
KEYWORDS  
EST.  
SOURCE  
house mouse.  
ORGANISM  
Mus musculus  
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;  
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Mus.  
1 (bases 1 to 468)  
Marra,M., Hillier,L., Allen,M., Bowles,M., Dietrich,N., Dubuque,T.,  
Geisel,S., Kucaba,T., Lacy,M., Le,M., Martin,J., Morris,M.,  
Schellenberg,K., Steptoe,M., Tan,F., Underwood,K., Moore,B.,  
Theising,B., Wylie,T., Lennon,G., Soares,B., Wilson,R. and  
Waterston,R.

TITLE  
The Washington University EST Project  
JOURNAL  
Submitted (1996)  
COMMENT  
Contact: Marra M/Mouse EST Project  
Washington University School of MedicineP  
4444 Forest Park Parkway, Box 8501, St. Louis, MO 63108  
Tel: 314 286 1800  
Fax: 314 286 1810  
Email: mouseest@wustl.edu

This clone is available royalty-free through LNL; contact the IMAGE Consortium (info@image.llnl.gov) for further information.  
MGI:274482

This clone was previously sequenced on the 5' end only, this new data is from the 3' end  
High quality sequence stop: 453.

## FEATURES

source

Location/Qualifiers  
1. .468  
/organism="Mus musculus"  
/strain="C57BL/6J"  
/db\_xref="taxon:10090"  
/clone="IMAGE:457594"  
/clone\_lib="Soares mouse placenta 4NbMPL3.5 14.5"  
/sex="unknown"  
/tissue\_type="placenta"  
/dev\_stage="adult"  
/lab\_host="DH10B"  
/note="Organ: placenta; Vector: pT7T3D-Pac (Pharmacia) with a modified polylinker; Site\_1: Not I; Site\_2: Eco RI; 1st strand cDNA was primed with a Not I - oligo(dT) primer [5', TGTACCAATCTGAAGTGGGAGCGCGCGGAATTTTTTTTTTTTTTTTTTTT T 3']; double-stranded cDNA was ligated to Eco RI adaptors (Pharmacia) digested with Not I and cloned into the Not I and Eco RI sites of the modified pT7T3 vector. Library went through one round of normalization, and was constructed by Bento Soares and M.Patima Bonaldo."  
75 a 166 c 176 g 51 t

## BASE COUNT

## ORIGIN

Query Match 85.9%; Score 214.8; DB 9; Length 468;  
Best Local Similarity 91.2%; Pred. No. 2.3e-36;  
Matches 228; Conservative 0; Mismatches 22; Indels 0; Gaps 0;  
QY 1 GCGGCTGGTCTCAACGTGGCGGGTGGCTTCGAGACGGCGCGCGCGCGG 60  
Db 288 GCGGCTGGTCTCAACGTGGCGGGTGGCTTCGAGACCGCGCGCGCGCGG 229  
QY 61 CTTCCGGGACACCTCTGTAGGGACCCAGCGCGCGCGCGCTTCTACGACGCGG 120  
Db 228 CTTCCGGGACACCTCTGTAGGGACCCAGCGGTGGCGCGCGCGCTTCTACGACGCGG 169  
QY 121 CCGCGAGTATTTCTTCGACGGGACCGGCGCCAGCTTCGAGCGCGTCTCTACTACTACCA 180  
Db 168 CCGCGAGTATTTCTTCGACGACACCGCGCCAGCTTCGATCGGTGCTCTACTACTACCA 109  
QY 181 GTCGCGTGGCGGCTGGCGGCGCGGCGGACGCTGCGGCTGCGAGCTCTCTGGAAGGCT 240  
Db 108 GTCGCGGCGCGGCTGAGAGCGCGCGGCGGACCTGCCCTCGACGCTTCTCTGGAGGAGGT 49  
QY 241 GGCCTTCTAC 250  
Db 48 GTCCTTCTAC 39

## RESULT 2

## BI295790

## LOCUS

DEFINITION 687 bp -mRNA linear EST 19-JUL-2001  
UI-R-DK0-cfa-f-09-0-UI.s1 UI-R-DK0 Rattus norvegicus CDNA clone  
UI-R-DK0-cfa-f-09-0-UI 3', mRNA sequence.

## ACCESSION

## BI295790

## VERSION

## BI295790.1

## KEYWORDS

## EST.

## SOURCE

## Norway rat.

## ORGANISM

## Rattus norvegicus

## Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

## Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae;

## Rattus.

## 1 (bases 1 to 687)

## Bonaldo, M.F., Lennon, G. and Soares, M.B.

## Normalization and subtraction: two approaches to facilitate gene

## discovery

## JOURNAL

## Genome Res. 6 (9), 791-806 (1996)

## MEDLINE

## COMMENT

97044477

Contact: Soares, MB

Program for Rat Gene Discovery and Mapping

University of Iowa

451 Eckstein Medical Research Building Iowa City, IA 52242, USA

Tel: 319 335 8250

Fax: 319 335 9565

Email: msoares@blue.weeg.uiowa.edu

The sequence contained an oligo-dT track that was present in the oligonucleotide that was used to prime the synthesis of first strand cDNA and therefore this may represent a bonafide poly A tail. The sequence tag present in the cDNA between the NotI site and the oligo-dT track served to identify it as a clone from the normalized rat placenta pool library cDNA library preparation: M.B. Soares Lab Clone distribution: clones will be available through Research Genetics (www.resgen.com) The following repetitive elements were found in this cDNA sequence: 1-41, 264-317, >AT\_rich#Low\_complexity 45-170, >BI\_MM#SINE/Alu 264-317, >GC\_rich#Low\_complexity  
Seq primer: M13 Forward  
POLYA=Yes.

## FEATURES

source

Location/Qualifiers

1. .687

/organism="Rattus norvegicus"

/strain="Sprague-Dawley"

/db\_xref="taxon:10116"

/clone="UI-R-DK0-cfa-f-09-0-UI"

/clone\_lib="UI-R-DK0"

/dev\_stage="ADULT"

/lab\_host="DH10B (Life Technologies)"

/note="Vector: pT7T3D-Pac (Pharmacia) with a modified polylinker; Site\_1: Not I; Site\_2: Eco RI; The UI-R-DK0 library is a subtracted library derived from a mixture of five individually tagged normalized rat libraries: brain-nRBP (20%), heart-nRHP (20%), kidney-nRKP (20%), aorta-nRAP (20%), and placenta-nRPP (20%). Each original library was constructed from a mixture of equal amounts of RNA from seven different developmental time-points: embryonic day 17, embryonic day 19, embryonic day 21, adult day 1, adult day 12, adult day 75, and adult day 200. (Exception: the aorta pool does not contain embryonic day 17 RNA and the placenta pool contains only the three embryonic stages). Each library was normalized individually according to the procedure described by Bonaldo, Lennon & Soares (Genome Research 6: 791-806, 1996). For construction of the DK0 subtracted library, plasmid DNA from each of the five individually tagged normalized libraries was mixed in the proportions specified above and electroporated into competent bacteria for production of single-stranded circular DNA representing the pool of libraries. Single-stranded circular DNA representing these five normalized libraries was then used as a tracer in a subtractive hybridization with a driver (PCR amplified inserts from a plasmid DNA template preparation) comprising: a) a set of about 1,000 arrayed clones from each of the five non-normalized libraries of brain (CT0s), heart (CS0s), kidney (CU0s), aorta (CW0s), and placenta (CX0s). The resulting pool of approximately 5,000 clones represented about 33.3% of the final driver population. A set of about 2,000 arrayed clones from each of the five normalized libraries of brain (CT0), heart (CS0), kidney (CU0), aorta (CW0), and placenta (CX0). The resulting pool of about 10,000 clones represented about 66.6% of the final driver population.

TAG\_LIB=UI-R-DK0

TAG\_TISSUE=rat placenta pool

TAG\_SEQ=TCAGCAGT

BASE COUNT

ORIGIN

140 a 217 c 203 g 126 t 1 others

Query Match

Best Local Similarity 77.1%; Score 192.8; DB 13; Length 687;

Matches 206; Conservative 0; Mismatches 23; Indels 0; Gaps 0;